



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,580	05/31/2001	Dale C. Madsen	02316.1412US01	3470
23552	7590	03/11/2004	EXAMINER	
MERCHANT & GOULD PC			TRAN, THANH Y	
P.O. BOX 2903			ART UNIT	
MINNEAPOLIS, MN 55402-0903			PAPER NUMBER	

2827

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,580

Applicant(s)

MADSEN ET AL.

Examiner

Thanh Y. Tran

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 022504.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities: There is a misspelling in claim 2, line 2, "a" should be changed to: --an--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3-4, 11-12, 19-20 and 25-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 11, 19 and 25 are unclear as to what Applicant means by "a front surface having at least one opening, the front surface abutting a second side of the first surface, wherein one or more of plurality of buttons of the keypad protrude through the at least one opening"? Since the first surface has a plurality of holes and the keypad has a plurality of buttons that *already* protrude through the plurality of holes of the first surface (as recited in claim 2), the Examiner does not see how "one or more of the plurality of buttons of the keypad" (as recited in claims 3 and 11) also protrude through the at least one opening of the front surface.

Claims 8, 16, 24 and 31 are unclear as to what Applicant means by "third and fourth surfaces disposed at opposing ends of the first surface that are perpendicular to the first surface"? It does not make sense if the "third and fourth surfaces disposed at opposing ends of the first

surface that are perpendicular to the first surface” since Applicant recites in claim 1 “a second surface substantially perpendicular to the first surface”.

Claim 9 recites the limitation "the printed circuit board" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Hardt et al (U.S. 6,229,709).

As to claim 1, Hardt et al discloses in Fig. 1, a communication panel comprising: a first surface (bottom surface of 20); a second surface (right side surface of 20) substantially perpendicular to the first surface; a first printed circuit board (19) having a first connector (22); a second printed circuit board (16) substantially perpendicular to the first printed circuit board (19), the second printed circuit board (16) having a second connector (24) mated to the first connector (22) of the first printed circuit board (19); and a cover surface (front surface of 20) having a first portion (horizontal edge of front surface) and a second portion (vertical edge of front surface) perpendicular to the first portion, the cover surface being mounted to the first and second surfaces such that the first portion is parallel to the first surface and the second portion is

parallel to the second surface, and wherein the first and second printed circuit boards (19, 16) are disposed within an interior region defined by the first surface, second surface, and cover surface (see figure 1).

As to claim 6, figure 1 of Hardt et al shows the second printed circuit board (16) contains a plurality of integrated circuits (61-64).

As to claim 7, figure 3 of Hardt et al shows a plurality of inserts (for example, a plurality of components, a power supply and a card guide 10) fastened/secured to the first surface and to the first printed circuit board (16).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3, 9-11, 14-15, 17, 18-19, 22-23, 25-26, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardt et al (U.S. 6,229,709) in view of Hodsdon (U.S. 4,621,373).

As to claim 2, Hardt et al discloses in Fig. 1 all limitations, except for an elastomeric keypad disposed between the first printed circuit board and the first surface, wherein the first surface has a plurality of holes and the keypad has a plurality of buttons that protrude through the plurality of holes. However, Hodsdon discloses in Figs. 1-3, the communication panel having the elastomeric keypad (62) (see col. 6, lines 35-65) disposed between the printed circuit board

(36) and the first surface (first surface is the surface of the top bezel 16), wherein the first surface has a plurality of holes (65) and the keypad (62) has a plurality of buttons (keys 14) that protrude through the plurality of holes (65). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Hardt et al to include the elastomeric keypad disposed between the first printed circuit board and the first surface as taught by Hodsdon. One of ordinary skill in the art would have been motivated because the elastomeric keypad would be used to control and input the data into the communication device.

As to claim 3, as best understood by Examiner, Hardt et al discloses in Fig. 1 all limitations, except for one or more one of the plurality of buttons of the keypad protrude through the at least one opening (at least one hole) of the first surface. However, Hodsdon discloses in Figs. 1-3, the communication panel having the keypad (62) having one or more of the plurality of buttons (keys 14) that protrude through the at least one opening (at least one hole) (65) of the first surface. (see col. 6, lines 35-65). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Hardt et al to include the keypad having one or more of the plurality of buttons that protrude through the at least one opening (at least one hole) of the first surface as taught by Hodsdon for controlling and input the data into the communication device.

As to claims 9-10 and 26, they recite limitations similar to claim 1, Hardt et al further discloses in figure 1, a first printed circuit board (19) parallel to the first surface (bottom surface of 20). Hardt et al does not disclose a first surface including a plurality of holes; and a first elastomeric keypad positioned between the first surface and the first printed circuit board, the

Art Unit: 2827

first elastomeric keypad having a plurality of buttons that protrude through the plurality of holes of the first surface. However, Hodsdon discloses in Figs. 1-3, the communication panel having the elastomeric keypad (62) (see col. 6, lines 35-65) disposed between the first printed circuit board (36) and the first surface (first surface is the surface of the top bezel 16), wherein the first surface has a plurality of holes (65) and the keypad (62) has a plurality of buttons (keys 14) that protrude through the plurality of holes (65). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Hardt et al to include the elastomeric keypad disposed between the first printed circuit board and the first surface as taught by Hodsdon. One of ordinary skill in the art would have been motivated because the elastomeric keypad would be used to control and input the data into the communication device.

As to claim 17, Hardt et al discloses in Fig. 1, a communication panel comprising: a first printed circuit board (19) having a first connector (22) and having a plurality of electrical contacts (28); and a second printed circuit board (16) substantially perpendicular to the first printed circuit board (19), the second printed circuit board (16) having a second connector (24) mated to the first connector (22) of the first printed circuit board (19), the second printed circuit board (16) being in electrical communication with the plurality of contacts (28) of the first printed circuit board (19) through the mated first and second connectors (22, 24).

Hardt et al does not disclose a first elastomeric keypad abutting the first printed circuit board, the elastomeric keypad having a plurality of conductive contact pads aligned with the plurality of electrical contacts of the first printed circuit board.

Hodsdon discloses in Figs. 1-3, the communication panel having the elastomeric keypad (62) (see col. 6, lines 35-65) abutting the printed circuit board (36), the elastomeric keypad (26) having a plurality of conductive contact pads aligned with the plurality of electrical contacts (40) of the first printed circuit board (see col. 5, lines 15-30, and col. 6, lines 35-52). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Hardt et al to include the elastomeric keypad abutting the printed circuit board as taught by Hodsdon. One of ordinary skill in the art would have been motivated because the elastomeric keypad would be used to control and input the data into the communication device.

As to claim 25, as best understood by Examiner, Hardt et al discloses in figure 1, a first printed circuit board (19) parallel to the first surface (bottom surface of 20). Hardt et al does not disclose a first surface including a plurality of holes; and a first elastomeric keypad positioned between the first surface and the first printed circuit board, the first elastomeric keypad having a plurality of buttons that protrude through the plurality of holes of the first surface.

However, Hodsdon discloses in Figs. 1-3, the communication panel having the elastomeric keypad (62) (see col. 6, lines 35-65) disposed between the first printed circuit board (36) and the first surface (first surface is the surface of the top bezel 16), wherein the first surface has a plurality of holes (65) and the keypad (62) has a plurality of buttons (keys 14) that protrude through the plurality of holes (65). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Hardt et al to include the elastomeric keypad disposed between the first printed circuit board and the first surface as taught by Hodsdon. One of ordinary skill in the art would have been motivated

because the elastomeric keypad would be used to control and input the data into the communication device.

Claims 11 and 19 recite limitations similar to claim 3. Therefore, they are rejected for the same reasons.

Claims 14, 22 and 29 recite limitations similar to claim 6. Therefore, they are rejected for the same reasons.

Claims 15, 23 and 30 recite limitations similar to claim 7. Therefore, they are rejected for the same reasons.

Claim 18 recites limitations similar to claims 9-10. Therefore, it is rejected for the same reasons.

8. Claims 4, 12, 20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardt et al (U.S. 6,229,709) in view of Hodsdon (U.S. 4,621,373) as applied to claims 1-3, 9-11, 17-19, 25-26 above, and further in view of Hsu (U.S. 5,121,296).

As to claim 4, Hardt et al discloses in Fig. 1 all limitations, except for a front surface including an extension opening and the cover surface includes an extension disposed within the extension opening of the front surface. Hsu discloses in Fig. 1, a front surface including an extension opening (125) and the cover surface (surface of 11) includes an extension (112) disposed within the extension opening (125) of the front surface. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Hardt et al by having a cover surface including an extension disposed within the

extension opening of the front surface as taught by Hsu for securely retaining the cover surface with the front surface of the apparatus.

Claims 12, 20 and 27 recite limitations similar to claim 4. Therefore, they are rejected for the same reasons.

9. Claims 5, 13, 21 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardt et al (U.S. 6,229,709) in view of Hodsdon (U.S. 4,621,373) as applied to claims 1-2, 9-12, and 17 above, and further in view of Thornton (U.S. 5,960,942).

As to claim 5, Hardt et al discloses in Figs. 1-3 all limitations, except for the first printed circuit board contains a plurality of light emitting diodes aligned with the plurality of buttons of the keypad. Thornton teaches the printed circuit board contains a plurality of light emitting diodes aligned with the plurality of buttons of the keypad (see Figs. 1-6, col. 3, line 63 – col. 4, line 67). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the communication system of Hardt et al by including a printed circuit board contains a plurality of light emitting diodes aligned with the plurality of buttons of the keypad as taught by Thornton. One of ordinary skill in the art would have been motivated because the plurality of light emitting diodes would be used to illuminate the buttons of the keypad (see col. 1, lines 10-20).

Claims 13, 21 and 28 recite limitations similar to claim 5. Therefore, they are rejected for the same reasons.

Art Unit: 2827

10. Claims 8, 16, 24 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardt et al (U.S. 6,229,709) in view of Buican et al (U.S. 6,339,536).

As to claim 8, as best understood by Examiner, figure 1 of Hardt et al shows the communication device having third (rear surface of 20) and fourth (left side surface of 20) surfaces disposed perpendicular to the first surface (bottom surface of 20); a first bracket (10A) mounted to the third surface. Hardt et al does not teach a second bracket mounted to the fourth surface. Buican et al teaches in figure 1, a communication apparatus comprising first, second, third and fourth surfaces, wherein a card guide (see the element mounted below element 121) is mounted to the fourth surface for allowing a corresponding card's bracket to be mounted/attached to. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Hardt et al by mounting a bracket in the fourth surface as taught by Buican et al for allowing a circuit card to be mounted to a card guide.

Claims 16, 24 and 31 recite limitations similar to claim 8. Therefore, they are rejected for the same reasons.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Leman (U.S. 6,261,104) teaches Riser Card Assembly and Method for its Installation.

Persson (U.S. 6,207,912) teaches Electrostatic Discharge Protection in a Portable Communication Device.

Davis et al (U.S. 6,674,650) teaches Card Retention Assembly.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (571) 272-2110. The examiner can normally be reached on Monday through Thursday and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo, can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TYT

David A. Zarneke
David A. Zarneke
Primary Examiner
3/4/4